

CONFERENCE PROCEEDINGS

RAND

Directions for Cost and
Outcome Analysis of
Starting Early Starting Smart
Summary of a Cost Expert Meeting

Jill S. Cannon, Lynn A. Karoly, M. Rebecca Kilburn

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Prepared for the Casey Family Programs

Labor and Population Program

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Preface

This document summarizes the proceedings of a meeting of cost analysis experts held August 1–2, 2000, convened by RAND on behalf of the Casey Family Programs and the Office of Early Childhood, Substance Abuse and Mental Health Services Administration (SAMHSA). The purpose of the meeting was to address the potential for cost-benefit and related analyses of subsequent demonstration studies of the *Starting Early Starting Smart* (SESS) program, which is a public/private initiative funded and directed through SAMHSA and the Casey Family Programs.

Participants at the meeting included four national experts in cost analysis with backgrounds in mental health and substance abuse, as well as several RAND staff with experience in cost analysis. Also participating were staff from SAMHSA, the Casey Family Programs, the SESS Data Coordinating Center, and two of the SESS program sites.

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Introduction

This document reports on a one-and-one-half-day meeting convened by RAND on behalf of the Casey Family Programs (CFP) and the Office of Early Childhood, Substance Abuse and Mental Health Services Administration (SAMHSA). Four national experts were invited to discuss issues surrounding cost-benefit and related analysis of the *Starting Early Starting Smart* (SESS) program, which is a public/private initiative led by SAMHSA and CFP. In addition, several staff from RAND with backgrounds in cost analysis and staff from SAMHSA, CFP, the SESS Data Coordinating Center, and two SESS sites participated in the meeting. The meeting agenda, a full list of participants, and biographies of the experts and RAND staff are included in Appendices A to C.

The SESS Program and Evaluation Design

SESS is designed to compare the effectiveness of integrated behavioral health services for children ages 0 to 7 and their families with the outcomes for children and families who receive the usual standard of community care. Integrated behavioral health services are defined as substance abuse treatment, substance abuse prevention, and mental health services.¹ The initial four-year phase of the SESS program began in 1997.

SESS currently has cooperative agreement grantees in 12 national sites. These sites fall into two natural clusters based on their organizational settings—primary health care (PC) and early childhood development (EC). PC sites provide health care to families of target (index) children, and EC sites provide pre-school education services to index children. There are currently five primary care sites and seven early childhood sites. See Appendix D for a full list of SESS sites. These clusters vary in several important ways, as shown below in Exhibit 1. PC sites target moderate-to-high risk families. However, participants at EC sites also generally demonstrate relatively high levels of stress and risk factors.

SESS is purposefully designed as a multi-site study encompassing diverse field settings in the hopes of generating strong evidence of its general applicability. In addition to units of observation at the program level (PC

¹ This discussion of the SESS program and evaluation design draws on the *Starting Early Starting Smart Phase One Report*, prepared by the SESS Data Coordinating Center, August 1998.

and EC), the units of analysis for the individual level are the index child and the family. The logic behind the design is twofold:

- to use an experimental or quasi-experimental design to detect program effects at the individual level, and
- to use variation in target population, program context, or program intervention at the program level to explain differences in program effectiveness across sites.

The sample sizes vary across sites, but most are around 100 to 300 index children. The pooled sample consists of 1,584 persons in the treatment group and 1,303 persons in the control (or comparison) group.

Exhibit 1

Characteristics of SESS Primary Care (PC) and Early Childhood (EC) Demonstration Sites

Primary Care	Early Childhood
Intervention begins from ages 0 to 3 in most sites	Intervention begins from ages 3 to 5 in most sites
Eligibility is based on individual screening to target caregivers or children who have specific risk behaviors	Eligibility is based on the setting, not the individuals within it; entire classrooms are eligible for these services (e.g., Head Start)
Program focuses behavioral health resources on parent	Program focuses on behavioral health and developmental needs of index child
Needs of caregiver determine program participation	Needs of caregivers are evaluated more indirectly
Case management component is an innovative addition in this setting	Behavioral health component is an innovative addition in this setting
Experimental design is used for all sites	Quasi-experimental design is used for all but one site, which is experimental

The current SESS evaluation is designed to test two specific hypotheses:

- The integration of behavioral health services within primary care or early childhood service sites will lead to higher rates of entry into prevention, early intervention, or treatment of children/families identified as in need of services (also greater participant satisfaction).
- The integration of behavioral health services within primary care or early childhood service sites will lead to improvements in social, emotional, and cognitive functioning in children and families served.

The first hypothesis focuses on outcomes of access, utilization, and satisfaction, whereas the second focuses on family functioning, parent/child interaction, and child outcomes. The design includes data collection on these topics at baseline and for an 18-month follow-up period, with follow-

up intervals that average six months (PC sites) or nine months (EC sites). CFP and SAMHSA are currently considering funding a longer-term follow-up for participants in a subset of the current sites. The SESS evaluation design and the longer-term follow-up do not currently incorporate cost-benefit or related analysis.

SAMHSA and CFP have contracted with EMT Associates, Inc. to run the SESS Data Coordinating Center (DCC). The DCC has a number of responsibilities associated with cross-site data collection, manipulation, and analysis. The DCC is also responsible for maintaining the overall program database. The five data sets collected include site-level intervention descriptions, contact log data (collected only for the treatment group), Services Access and Utilization and Satisfaction Survey, baseline data, and outcome data. Baseline data and some follow-up data have been collected for treatment and comparison groups.

Purpose of Cost Expert Meeting and Overview of the Proceedings

CFP and SAMHSA plan to implement a second phase of the SESS program (SESS-2). The design of SESS-2 is currently in the planning stage. As part of the planning process, CFP and SAMHSA would like to incorporate cost-related analysis (e.g., cost-benefit analysis, cost effectiveness, etc.) into the SESS-2 design, both in terms of data collection and subsequent analysis. The cost expert meeting convened by RAND is a step in that planning process. RAND will also prepare a report that evaluates options and makes recommendations for incorporating cost-benefit, or related analysis into future SESS demonstrations.

The primary purpose of the cost expert meeting was to assess the feasibility of incorporating cost-benefit, return-on-investment, or related analysis into the SESS evaluation design and to identify promising strategies for future data collection and analysis. This will help SESS monetize the value of the program's outcomes to society and quantify the amount and distribution of costs in order to facilitate quantitative analysis of relevant decisions and policies. Experts for this meeting were selected to represent various cost analysis backgrounds in fields such as mental and physical health, criminal justice, and substance abuse. They were asked to discuss the potential for measuring costs and savings of the SESS program based on their understanding of the existing body of knowledge. They were also asked to focus on the early childhood age range (0 to 7) when possible. The meeting participants were not expected to review all the literature in this area or to evaluate the empirical evidence, nor did they generate specific recommendations at this meeting. Appendix E lists background reading

materials for the meeting. In the course of the one-and-one-half-day meeting, many issues were raised that could not be fully expanded upon because of time constraints. These issues will be considered for further development in the follow-up study design report prepared by RAND.

The remainder of this document reflects the discussion of participants on several major topics. The participants were charged first with learning about the current design of the SESS program and the motivation behind SESS cost analysis. They then turned to a discussion of SESS program benefits, costs, and measurement challenges, including potential design issues for future SESS program planning. These proceedings are organized around major themes and do not necessarily track the order of the discussion that took place.

Potential Program Benefits

The discussion of SESS program benefits centered on several outcome domains for children and families. It was stressed that cost-benefit or cost-avoidance analysis should factor in benefits for both adults (e.g., caregiver, caregiver partner, other key adults in the child's life) and children (e.g., index child, siblings, other children in the child's neighborhood or childcare setting or school). It was reiterated that SESS targets children 0 to 7 and caregivers who are presently at-risk for mental health and/or substance abuse problems. The current study design provides for a short-term follow-up of participants; a longer-term follow-up for a subset of the current demonstration sites is being planned.

Outcome Domains

The potential areas of societal benefit for the SESS program can be loosely grouped into four broad outcome domains: crime/criminal justice, education, physical and mental health, and economic outcomes (i.e., income, employment, and utilization of social services). We summarize the discussion for each of these domains in turn.

Crime/Criminal Justice

Participants generally agreed that this is a costly domain for society, with the potential for large cost savings by avoiding negative outcomes. However, its importance depends upon whether the population served by the program is likely to engage in criminal activities that would be avoided through the SESS intervention. As one participant noted, a large amount of criminal justice costs accrue to a very small percentage of the population, many of whom are considered high risk. Ultimately, the meeting experts decided that this domain is not likely to be very useful to measure in terms

of SESS child outcomes because of the short-term analysis constraints—most crime-related cost savings will occur several years after the age at which SESS children are studied. However, if children are followed into their teens, this domain becomes more relevant. There may be merit in considering criminal justice outcomes for adults. Behavioral changes in this domain may occur during the intervention period, can continue to be measured even in a short-term follow-up, and can generate a large fraction of cost savings. Caregivers and partners could potentially provide self-reports of criminal activities, arrests, and incarcerations. Information on arrests and incarcerations can also be obtained through administrative records, although permission is required for obtaining this information. However, several experts noted that most caregivers who participate in the SESS program are women, and they are less likely to commit crimes or to be incarcerated. On the other hand, the incidence of criminal behavior may be higher among substance users (including women).

Education

It was generally agreed by the experts that educational benefits would most likely affect children rather than adults, unless a significant number of caregivers enter the program lacking a high school diploma and subsequently increase their educational attainment. Consequently, the discussion primarily addressed child outcomes for this domain. While some participants mentioned improved school readiness or performance on standardized tests as a potential benefit, other discussants stated that these outcomes may be difficult to monetize (i.e., to determine the monetary benefit to participants or society at large). Benefits such as decreased grade repetition and special education placement were identified as outcomes that are easier to monetize and which have been incorporated into other cost-benefit analyses of early intervention programs. Also mentioned were the benefits of fewer missed school days (because of health improvements or parents' labor force stability) and increased educational attainment. However, while school attendance may be measured in the pre-school and early elementary school years, educational attainment is a longer-term benefit that requires a longer follow-up period.

Physical and Mental Health

Because SESS focuses on substance abuse and mental health, participants identified many potential health benefits, including

- reduced substance use,
- reduced child abuse and neglect,
- reduced family violence,
- reduced hospitalizations and emergency room visits,

- reduced morbidity and mortality,
- improved physical and mental health status,
- improved disability treatment,
- improved cognitive, emotional, and behavioral functioning,
- increased appropriate use of health services, and
- caregiver's reduced fertility and/or longer time periods between subsequent pregnancies (i.e., improved family planning), and improved birth outcomes (e.g., birth weight) for births that do occur.

It was also noted that many of these benefits could be observed in both the short run and the long run, and some outcomes could be linked to specific cost savings. For example, there are a number of studies documenting the economic costs of depression, so that improvements in mental health could be associated with economic returns. If a long-term follow-up is planned, benefits such as reduced substance abuse and teen pregnancy rates of SESS children could also be included. To the extent that there are spillover benefits to other family members, outcomes such as teen pregnancy and substance abuse could possibly be examined for older siblings who would be at risk for these negative outcomes prior to their younger index sibling in the SESS program. In general, participants agreed that looking at the cost savings from improved health outcomes of caregivers would be an outcome domain that was more likely to generate significant savings compared with caregivers' criminal justice-related outcomes.

Economic Outcomes

Participants touched on the issues surrounding several potential economic outcome benefits, including

- individual and family income,
- labor force participation, lost work days, and wages, and
- use of social services, including welfare and other safety net programs.

In general, these are domains that are most relevant to measure for caregivers in both the short run and long run. With longer-term follow-up, they can be domains to measure for participating children. In discussing these outcomes, participants noted the potential for measuring continuous employment histories and lost days of work to fully capture the economic benefits. In terms of service utilization, relevant outcomes would include measures of out-of-home placement, use of child welfare and foster care services, and family use of various forms of public assistance.

Other Issues Related to Program Benefits

Some general issues related to SESS program benefits were raised in the course of the discussion. Given that there are many outcomes that could be measured for SESS program participants, one expert suggested looking at a few "whopper outcomes" for a cost-benefit analysis—those outcomes that are likely to be significantly affected by the intervention, can readily be monetized, and that have large societal costs (or benefits). This theme of a more focused set of outcome variables recurred throughout the meeting. The point was made that policymakers are generally interested in only a few big outcomes that give them a clear picture of the costs avoided or benefits of an intervention. Focusing on these whopper outcomes would also help SESS direct the design of future programs and analyses.

Another issue that arose is the problem of having sufficient statistical power to look at an outcome that occurs for only a small percentage of the population. As noted above, for example, criminal justice outcomes may be classified as "whopper outcomes," but they may be relatively rare events unless the SESS program is serving a very high-risk group. This led to a discussion of how targeting the program to more at-risk children and families would make some low-incidence events more prevalent. This would lead to a potentially greater impact for the program and greater cost savings.

As mentioned above, several potential benefits will require long-term data collection for measurement, especially if they pertain to participating children. This may require planning at the outset of SESS-2 for a long-term study to ensure the program's ability to track individuals for future interviews or administrative data collection (e.g., obtaining Social Security numbers or permission for administrative data collection early on). The interest in longer-term follow-up also places a greater emphasis on minimizing attrition throughout the intervention period and for subsequent follow-on data collection.

A concern specific to some of the outcomes delineated above is the sensitive nature of the information being collected and the potential for underreporting by study participants, at least until they are comfortable with the SESS program staff and data collection enumerator. This may be an issue for outcomes like family violence, alcohol or drug abuse, and criminal activity. The use of repeat measures as part of the study design and retrospective ratings of baseline functioning, as well as methods to increase the likelihood of full disclosure on the part of study participants, may be required for these sensitive variables.

Another participant mentioned the benefit to families of improved resource management. This outcome extends beyond simply capturing an increased use of services or other resources, and implies the purposeful use of an integrated system of services that can save time and money for the user and provider. In some cases, it may be difficult to determine whether families are likely to make better use of available services—some services may be used rarely or only by a subset of participants (e.g., emergency room visits). One participant suggested the use of vignettes to elicit information on how respondents would respond to certain situations, such as one that would require a decision about seeking medical care and from what type of provider (e.g., emergency room or clinic).

Several site representatives mentioned that system changes (e.g., improved management through the service delivery organization or more cross-agency cooperation) are evident in addition to changes in behavior for program participants. SESS should consider whether there is a way to capture these changes and their implications for cost savings. If this is the principal consideration, then SESS should tailor the cost and benefit measurement tools and procedures to support continuous quality improvement, which is based on measurements of short-term outcomes.

Program Costs

The discussion covered many issues related to program costs and how to measure those costs. The consensus was that SESS needs a feasible, informative, standardized method for cost analysis. Furthermore, actual or economic costs are not the same as budgetary or accounting costs, and analyzing them correctly is a significant undertaking. Costs should be captured in multiple dimensions, and account for, whenever possible, cost shifting and cost offsets for both treatment and control/comparison groups. Participants generally agreed that costs should be collected so that aggregate program costs could be determined, rather than simply costs attributable to serving a particular family or child. At the same time, costs are expected to vary by site and so should be measured and reported at that level of disaggregation. Another way costs can be categorized is by risk group. Participants agreed that it might be better to reserve expensive interventions for high-risk groups.

Chief among the concerns was that costs be captured in such a way that the full cost of implementing the same program in another site can be determined. This includes the need to capture both direct and indirect incremental costs of the program as it would be implemented in another setting. It was stressed that it is not just actual dollars spent that are important, but all resources used by the program. For example, in some

cases, program space is shared or donated and in other cases it is leased or purchased. The cost analysis should account for the average cost of space per square foot or some other metric so that other localities understand the full cost of implementing the equivalent program design. Another example is volunteer time, which should be valued at a given average wage. It cannot be assumed that the same program in another site would be able to benefit from the same amount of volunteer time. At the same time, program costs should be exclusive of costs unique to the implementation and evaluation of the demonstration programs. Thus, evaluation costs should be excluded, as should those associated with coordinating and implementing the SESS design across the demonstration sites.

A related issue associated with capturing full cost (e.g., opportunity cost) is the time cost of caregivers associated with participating in program services. These types of time costs may also be relevant for other family members who participate in treatment services.

Of concern to some participants was that SESS should capture service use within both the program itself and referral services. The SESS contact logs are a good place to begin capturing this information, and additional effort will be required to follow up with SESS participants to see what referral services they utilize, for how long, and at what cost. These referral resources are being consumed outside the program, and if similar external resources are not available when the program is replicated, those costs must be borne by other entities. Referral services for the control group should be tracked as well.

It was agreed that cost information should be measured and presented so that it can be reaggregated for different purposes, such as for program replication or for provider or policymaker use. One panelist gave the analogy of a recipe with ingredients—SESS needs to spell out the resource ingredients necessary for different services and their range of costs. SESS should differentiate between fixed and variable costs, and distribute overhead costs across all services provided. By tracking service utilization for individual program participants, program costs can be aggregated using information on the specific cost elements associated with delivering a specific service.

Participants also agreed that the collection of cost data be designed and implemented prospectively rather than retrospectively. This will greatly improve the chances for collecting accurate, useful data. Site representatives stressed that the settings and populations are different across SESS sites, and this should be taken into account. SESS might want to look at certain variables at some sites but not at others. SESS should also consider collecting contact log data for the control groups as well as the treatment groups.

Another participant made the point that SESS sites are “working” sites. They emphasize the delivery of services more, and the collection of data less, than would a research-oriented site. For all data collection, participants felt that SESS should provide technical assistance and support to collect information consistently across sites. A major element of this support would be to provide common software, so sites have appropriate tools to track and record the information SESS requires. The possibility of using web-based methods for collecting cost data from demonstration sites was mentioned. Some sites may require training in cost allocation, depending upon the level of staff expertise. Site representatives stressed that it is very important to tell the sites up front what they will need to count and track so they may plan accordingly.

For future demonstration sites, it was suggested that the capacity for collecting cost data (or even outcome data) might be a criterion for evaluating prospective demonstration sites. Another option offered was to target sites with an incentive to carefully track program costs because the implementing site would otherwise be at risk of adverse outcomes and costs. Examples of such organizations include health maintenance organizations (HMOs), child welfare carve-outs, and employer wellness plans. At the same time, it is important that demonstration sites service families at high risk, as discussed above.

Some other ideas that were mentioned and may merit further attention were the need to separate varying start-up and overhead costs depending on local situations, the treatment of fundraising costs, and the distinction between measuring outcome costs and program costs.

Other Issues for Future Planning and Evaluation

Some major points emerged throughout the discussions that are relevant for SESS in future planning. One point was that CFP and SAMHSA staff should consider using the results of the current SESS program evaluation to identify the most at-risk target population to serve in SESS-2. This will likely increase the program’s impact and potentially generate greater cost savings.

Another point was that if SESS is successful, participants’ use of services might actually *increase* in some instances in the short term. For instance, families and children may be identified for new services, such as substance abuse treatment or mental health care visits, which will require intensive short-term usage or sustained use of expensive services. Discussants agreed that there is a need to identify a treatment time path (e.g., for mental health services or substance abuse treatment) that could be used to assess the appropriateness of care received by program participants across time. The focus for SESS should be eventual cost savings rather than a decrease in service usage.

One panelist offered the perspective that analysts should develop a comprehensive logic model for SESS that analyzes the relationships among the following variables:

- *resources*—e.g., time, space, transportation
- *procedures*—e.g., degree of integration of services, substance abuse prevention services, multi-disciplinary teams
- *processes*—e.g., child's attachment to caregiver, child's behavioral competencies, caregiver's substance abuse
- *outcomes*—e.g., cognitive development, use of mental health services, use of income support
- *contextual variables*—e.g., characteristics of service provider, target population, study setting.

This model could then be used to analyze the relationship between and among cost and outcomes; processes and outcomes; procedures, processes, and outcomes; and resources, procedures, processes, and outcomes. The ultimate objective is to find the optimum (i.e., outcome maximizing or cost minimizing) path from resources through procedures and processes to outcomes. This might be accomplished by employing methods from operations research such as linear programming.

Based on input from SESS site staff, participants agreed that SESS should be sensitive to the burden of data collection in any future study design. Site staff pointed out that program participants already spend several hours providing information to the sites as part of the current evaluation. Other sources of data may be difficult to acquire; some administrative data, for instance, may be collected by other agencies but be hard to access. SESS should look to other sources (e.g., public assistance records or school records) for information that may be there to exploit without requiring site staff to collect it.

A couple of participants remarked that costs and benefits might vary in their distribution across stakeholders. Some cost savings may not go to the agency or organization generating them. The issue of benefits and costs falling in different organizational stovepipes or jurisdictional entities should be taken into account when assessing the full range of program costs and benefits. This perspective also argues against more traditional cost-benefit analysis from the perspective of a "social utilitarian" in favor of a disaggregated analysis that links program benefits to specific agencies or providers and accounts for their incentives to invest in a given intervention.

A related issue is the distribution of costs and benefits across time. Program costs are typically incurred early, while many benefits are not realized until years later. A term-limited politician may not receive credit for such a program, and may therefore prefer to support a program with a quicker payoff.

There was a strong preference among the experts for implementing randomized control designs in future demonstration sites whenever possible, with “clean” or well-defined differences in intervention models across sites. One of the concerns with the comparison group design in some of the current SESS sites is the possibility that treatment and comparison groups are not equivalent at baseline. However, it was not suggested that future interventions be identical across sites; some variation in program design—around a core intervention model—would provide useful information about how different program designs would affect outcomes. Another recommendation was that the design of future demonstrations should account for underlying cost parameters, with the objective of avoiding both low-cost models (that are likely to be ineffective), as well as high-cost models (that are unlikely to be implemented more broadly).

A related issue was the appropriate comparison group for those receiving SESS treatment services. In the current evaluation, the control or comparison groups receive services but do not participate in a primary-care setting or early childhood center that integrates behavioral health services with other services. An alternative comparison or control group would be one that receives no services.

A concern of participants was the evidently high rate of program attrition in the current SESS evaluation—at least in some sites—based on several rounds of data collection to date. For the current intervention sites, it is important to understand the reasons for attrition and the differences between attrition from the program and attrition from data collection. Given this attrition concern, SESS should plan for and minimize data collection attrition in SESS-2 by using measures such as obtaining signed consent forms for tracking, recording Social Security Numbers for all participants, and understanding the options for and costs of employing tracking services later in the study. This will also require an up-front commitment of resources.

Methodological Considerations for Future Analysis

Several methodological issues that merit consideration in a cost-benefit analysis were discussed briefly. These include:

- *Choosing an appropriate discount rate to evaluate long-run program benefits or cost savings.* Typically, future costs and benefits are discounted to the present to allow comparisons with other programs that may have a

different time-path of costs and savings. Conclusions may be sensitive to the choice of the discount rate.

- *Capturing uncertainty associated with measures of program costs and benefits.* Program evaluation involves uncertainty associated with estimates of program outcomes and even program costs. The degree of uncertainty associated with cost-benefit calculations and their implications for decisionmaking should be conveyed to policymakers.
- *Identifying critical assumptions.* Program costs and benefits may depend on future events. Five years ago, one might have estimated quite different outcomes of early intervention with poor families, depending on whether the welfare laws were changed. Today, one's estimates might depend on measures adopted to improve access to health care by the working poor or on whether the economy continues to boom. Policymakers should be made aware of assumptions about future developments that may drive the success or failure of the program.
- *Quantifying multiplier and spillover effects.* Intervention programs may have broader impacts beyond those manifest among participating children and families. For example, a program may be intended for specific families, but neighborhood children and families may also benefit indirectly owing to decreased neighbor violence or crime, or improved classroom behavior by the participating child. Ideally, these multiplier or spillover effects would be quantified, but they are often difficult or expensive to capture.
- *Expressing some outcomes in terms of dollar benefits or cost savings.* Monetizing outcomes that are not easily translated into dollar values will be a challenge. For example, improved school readiness may be a benefit to children who participate in SESS, but how is that outcome best quantified in dollar terms?
- *Translating short-term outcomes into long-term outcomes.* In many cases, program impacts are observed only in the short-run and in domains that are not easily translated into dollar savings (e.g., improved IQ or reduced behavior problems). A methodological advance would be the ability to predict long-term benefits based on short-term outcomes in advance of a long-term follow-up. Participants recognized the need to link immediate outcomes (e.g., improved child health upon entry into school) with more distal outcomes that can be monetized (e.g., improved educational achievement and graduation rates and their impact on labor force participation).

Next Steps

As previously mentioned, the purpose of the meeting was to generate ideas for a subsequent publication on assessing the benefits and costs of early childhood intervention programs, with a specific application to SESS. RAND staff will incorporate the ideas presented at this meeting into the report that is expected to be published in early 2001. That report will go into further depth on the issues related to cost-benefit analysis and provide recommendations for CFP and SAMHSA staff regarding a longer-term follow-up study of a subset of the current SESS sites and the evaluation of SESS-2.

Appendix A

Meeting Agenda

August 1–2, 2000
 RAND
 Arlington, Virginia

Tuesday, August 1, 2000

1:30pm – 1:45pm	Welcome and introductions	Pat Salomon, SAMHSA
1:45pm – 2:00pm	Review meeting objectives and agenda <ul style="list-style-type: none"> • Identify pathways for SESS program outcomes to produce future cost avoidance or other economic benefits • Discuss design options for follow-on SESS study (SESS-2) 	Lynn Karoly, RAND
2:00pm – 2:15pm	Motivation and background for SESS cost analysis	Michele Basen, SAMHSA Peter Pecora, CFP
2:15pm – 3:15pm	SESS data availability <ul style="list-style-type: none"> • Review available SESS data and early results • Discuss strengths and limitations 	Fred Springer, SESS
3:15pm – 3:30pm	BREAK	
3:30pm – 5:00pm	Discussion of feasible cost-avoidance or cost-benefit study designs <ul style="list-style-type: none"> • Potential pathways to cost avoidance or other economic benefits • Data requirements • Data collection approaches 	Panel of cost experts

Wednesday, August 2, 2000

8:30am – 9:30am	Focused discussion of promising program outcomes and their measurement	Panel of cost experts Fred Springer SESS site representatives
9:30am – 10:15am	Focused discussion of program costs and their measurement	Panel of cost experts Fred Springer SESS site representatives
10:15am – 10:30am	BREAK	
10:30am – 11:15pm	Focused discussion of evaluation design issues: <ul style="list-style-type: none"> • Standardization of program model • Population served • Experimental vs. quasi-experimental design 	Panel of cost experts Fred Springer SESS site representatives
11:15am – 12:00pm	Discussion of other methodological issues <ul style="list-style-type: none"> • Minimizing program attrition • Projecting long-term benefits 	Panel of cost experts Fred Springer SESS site representatives
12:00pm – 1:00pm	LUNCH	
1:00pm – 2:00pm	Reach consensus on promising pathways and design strategies for SESS and SESS-2	Participants
2:00am – 2:30am	Review SESS-2 project possibilities	Michele Basen, SAMHSA Peter Pecora, CFP
2:30pm – 3:00pm	Summarize discussion	Lynn Karoly, RAND
3:00pm – 3:30pm	Define next steps and timeline	Michele Basen, SAMHSA Peter Pecora, CFP
3:30pm	ADJOURN	

Appendix B

Meeting Participants

Panel of Experts

Anthony Broskowski, Ph.D.
President, Pareto Solutions, LC

William A. Hargreaves, Ph.D.
Professor, Department of Psychiatry
University of California, San Francisco

Brenda Reiss-Brennan, MS, APRN, CS
President, Primary Care Family Therapy
Clinics, Inc.
Consultant, Primary Mental Health
Integration
Intermountain Health Care

Brian T. Yates, Ph.D.
Professor, Department of Psychology
American University

RAND Staff

James H. Bigelow, Ph.D.
Senior Mathematician

Jill Cannon, M.P.P.
Child Policy Project Manager

Jon Caulkins, Ph.D.
Director, RAND Pittsburgh Office

Lynn A. Karoly, Ph.D.
Senior Economist

M. Rebecca Kilburn, Ph.D.
Senior Economist
Director, Child Policy Project

Substance Abuse and Mental Health Services**Administration**

Joseph Autry III, M.D.
Deputy Administrator
Substance Abuse and Mental Health Services
Administration

Michele M. Basen, M.P.A.
Public Health Analyst
Office on Early Childhood
Center for Substance Abuse Treatment

Lorinda Daniel, M.A.
Special Assistant
Office of the Administrator
Substance Abuse and Mental Health Services
Administration

Andrea Kamargo
Office of Policy and Planning
Center for Substance Abuse Prevention

Judith W. Katz-Leavy, M.Ed.
Senior Policy Analyst
Office of Policy Planning and Administration
Center for Mental Health Services

Mary C. Knipmeyer, Ph.D.
Director
HIV AIDS Cost Study
Center for Mental Health Services

Patricia Salomon, M.D.
Director, Office on Early Childhood
Center for Substance Abuse Prevention

Dr. Ruth Sanchez-Way
Acting Director
Center for Substance Abuse Prevention

Velva Taylor Spriggs
Public Health Advisor
Office on Early Childhood
Center for Mental Health Services

Jocelyn Whitfield
Public Health Advisor
Office on Early Childhood
Center for Substance Abuse Prevention

Casey Family Program

Eileen O'Brien, Ph.D.
Senior Enterprise Development Specialist
Casey Family Programs

Peter J. Pecora, Ph.D.
Manager of Research Services
Casey Family Programs; and Professor,
University of Washington

Starting Early Starting Smart

David Deere, M.S.W.
Research Associate
UAMS—University Affiliated Program of
Arkansas

Miriam Escobar
Financial Administrator
Prenatal Chemical Addiction Research and
Education (CARE) Program
U. of Miami School of Medicine

Lori Hanson, Ph.D.
Project Coordinator
Perinatal Chemical Addiction Research
and Education (CARE) Program
U. of Miami School of Medicine

Irene Jilson, Ph.D.
President
Policy Research Incorporated

Karen Rossmair
Fiscal Officer
Child Development, Inc.

J. Fred Springer, Ph.D.
Research Director
EMT Associates, Inc.

Appendix C

Biographical Sketches for RAND Staff and Expert Panel

JAMES BIGELOW (Ph.D., Operations Research, Stanford, 1970) is a Senior Mathematician at RAND with expertise in cost analysis and mathematical modeling. In addition to his skills in data analysis and computing, he has addressed theoretical problems including non-monetary costs and benefits, computational efficiency, model structure, and consistency. Dr. Bigelow has applied these methods to a broad array of subjects. He has conducted a number of studies on medical subjects, including leukemia chemotherapy, screening for cancer of the uterine cervix, altitude bends (decompression sickness) in humans, and renal function responses to stress. More recently, he has investigated the provision of health care services to people with developmental disabilities (i.e., mental retardation, cerebral palsy, seizure disorders, or autism) in a community setting and the use of modern information technology in case management of congestive heart failure patients. He has also applied cost-benefit methods to several environmental policy issues involving both air and water quality, as well as various national security topics.

ANTHONY BROSKOWSKI (Ph.D., Clinical Psychology, Indiana University, 1967) is President of Pareto Solutions, L.C., a consulting firm specializing in computer models for risk-sharing arrangements, disease management, and designing integrated Behavioral Healthcare and Child Welfare service delivery systems. He previously served as Director of Health Care Information for Prudential Insurance Co. and Senior Vice President and Senior Analyst at Preferred Health Care, Ltd. (now Value-Options Healthcare, a firm specializing in mental health "carve-outs"). From 1977 to 1986, he served as the Executive Director of Northside Centers in Tampa, Florida, where he developed a comprehensive and innovative system of alternative mental health programs for adults and children. Dr. Broskowski has served as a consultant to major corporations, federal and state government agencies, and nonprofit human service agencies. He has published extensively on the topics of executive leadership, mental health program administration and systems of managed care, computer information systems, and program evaluation and management of risks, and edited a book on organizational and clinical linkages between mental health and primary health care. Upon the completion of his doctorate, Dr. Broskowski served three years as an Assistant Professor at the University of Pittsburgh. After a year of post-doctoral training at the Laboratory of Community Psychiatry, Harvard Medical School, he continued as a member of the Harvard faculty for seven years.

JILL CANNON (M.P.P., Public Policy, UCLA, 1998) is the project manager for the RAND Child Policy Project. The RAND Child Policy Project provides easier access to objective information that will help improve policy and decisionmaking on children's issues. Her research interests include child and family policy, with a specific interest in child care. Her graduate policy research project examined the implications of welfare reform for child-care availability in the County of Los Angeles. She is currently managing a new web site project, the Promising Practices Network, which provides information about effective programs for individuals interested in services for children and families. Previously, Ms. Cannon worked for the National Association for the Education of Young Children in Washington, D.C.

JONATHAN CAULKINS (Ph.D., Operations Research, Massachusetts Institute of Technology, 1990) is director of RAND's new office in Pittsburgh and is on the research staff of RAND's Drug Policy Research Center. Dr. Caulkins' research focuses on building policy models to assess the effectiveness and/or cost-effectiveness of different broad classes of interventions on common metrics. Early work included comparing the cost-effectiveness of different drug control interventions and of different crime and violence control interventions. More recent work focuses on prevention programs, violence prevention, and early interventions with youth and their families that are designed to prevent a wide-range of social problems. Two significant methodological challenges Caulkins and his colleagues have addressed in recent work are how to appropriately credit prevention programs with their full range of benefits given that those benefits tend to spill over programmatic and jurisdictional boundaries and how best to spread investments in prevention across multiple programs to "hedge" against the uncertainties about each program's performance. Dr. Caulkins served as the co-Director of the RAND Drug Policy Research Center (DPRC) from 1994 to 1996 and was a Professor of Operations Research and Public Policy at Carnegie Mellon University from 1990 to 1999.

WILLIAM A. HARGREAVES (Ph.D., Clinical Psychology, University of Chicago, 1959) is Professor of Medical Psychology in the Department of Psychiatry, University of California, San Francisco. He is a senior member of the Center for Mental Health Services Research, a consortium of faculty from the Berkeley and San Francisco campuses of the University of California. The Center combines health economists, clinical services investigators, and other social scientists who collaborate in research on mental health care. Dr. Hargreaves has published primarily from his research on pharmacologic and psychosocial treatment of schizophrenia, and earlier research on substance abuse treatment. In the last 15 years he has concentrated on cost-effectiveness studies of mental

health services for adults in public-sector programs, including studies of assertive community treatment. In recent years he has been collaborating on research on treatment of depression and other mental disorders that present in HMO primary care settings. His long collaboration with health economist Teh-wei Hu led, in 1998, to the publication of their textbook (with Martha Shumway and Brian Cuffel), *Cost-Outcome Methods for Mental Health*, intended to introduce clinical investigators to economic methods and facilitate their collaboration with health economists.

LYNN A. KAROLY (Ph.D., Economics, Yale, 1988) is a RAND senior economist and Director of RAND's Labor and Population (L&P) Program. L&P conducts national and international research on a broad range of human resource issues, including social welfare policy and family and child well-being. Dr. Karoly's own research has focused on topics in wage and income distribution, social welfare policy, early childhood development, youth education and labor market behavior, health insurance and retirement behavior. Dr. Karoly lead the interdisciplinary team of RAND researchers who investigated the costs and benefits of early childhood intervention programs based on a thorough literature review and synthesis, and a cost-benefit analysis. The findings of the study were presented to the Subcommittee on Human Resources, Committee on Government Reform and Oversight, U.S. House of Representatives, and to the National Governor's Association. Dr. Karoly is also the Co-PI on an ongoing study of the impact of the 1996 welfare reform legislation on disabled children receiving SSI benefits. In addition to her research, Karoly has been on the faculty of the RAND Graduate School of Policy Studies since 1989 and she is a co-editor of the *Journal of Human Resources*.

M. REBECCA KILBURN (Ph.D., Economics, University of Chicago, 1994) is an economist who analyzes public policy issues in areas including child and family policy and human capital and serves as Director of RAND's Child Policy Project. She is currently studying the impact of state-level child care regulations on the price of child care and the types of child care families use. Another ongoing project examines the role of child care in promoting physical and cognitive development in children in the U.S. and Malaysia. A recent project explored the potential for early childhood intervention projects to pay for themselves by generating government savings. Other recent studies have investigated the effects of military educational benefits such as the Montgomery GI Bill, the interrelated nature of test scores and educational attainment; and differences in military officers' careers by race and gender. Dr. Kilburn has served as the Associate Director of National Defense Research Institute's Forces and Resources Policy Center and has taught economics at both UCLA and the University of Chicago.

BRENDA REISS-BRENNAN (M.S., Psychosocial Nursing, University of Utah, 1978) is licensed by the State of Utah as an Advanced Practice Nurse in Psychiatric Nursing with Prescriptive Practice and is Board certified as a Child and Adolescent Clinical Nurse Specialist. Ms. Reiss-Brennan's dedication and innovation in the field of Mental Health Nursing has evolved into a corporate business that has provided research-based consultation and family services for over 20 years. With the support of her multidisciplinary team she has developed Relationship Competence Training, TM(RCT), which is a standardized method of identifying, tracking, managing and building sustainable relationship resources for individuals within their families and their communities. Ms. Reiss-Brennan has published and presented both nationally and internationally on her work. Consultation with various national organization includes: Casey Family Program, Intermountain Health Care/HMO, Intermountain Health Care/Mission Services, Center for Mental Health Services, US Department of Health, Bureau of Primary Care, US Department of Health. Her leadership with Intermountain Health Care as the Director of the epidemiological investigation of Primary Mental Health Integration resulted in an invitation from the Surgeon General's office to present and dialogue with the Surgeon General in the fall of 2000. Along with fifteen national leaders in the field, she will address "integration" as a practical solution to the Surgeon Generals National Mental Health Report, which was released in December of 1999. In 1996 she was awarded the National Clinical Practice Award in Psychiatric Nursing from the Society for Education and Research in Mental Health Nursing. She holds a long-standing faculty position at the University of Utah College of Nursing.

BRIAN T. YATES (Ph.D. 1976, Stanford University, Psychology) is a tenured Professor in the Department of Psychology at American University in Washington, DC, where he began as an Assistant Professor in 1976. Dr. Yates has published over 55 articles, book chapters, and books. Most apply cost-effectiveness or cost-benefit analysis to the systematic evaluation and improvement of human services. His 1980 book, *Improving Effectiveness and Reducing Costs in Mental Health*, laid the groundwork for an integration of program evaluation, economics, and operations research in *Analyzing Costs, Procedures, Processes, and Outcomes in Human Services*, his fifth book (published by Sage in 1996). Dr. Yates has conducted Cost → Procedure → Process → Outcome Analysis (CPPOA) for service enterprises and research initiatives in prevention of alcohol, tobacco, and other substance abuse and suicide, treatment of opiate and cocaine addiction, residential programs for urban youth and for mentally retarded adults, and consumer-operated services. He wrote the manual for helping substance abuse treatment programs measure and improve their cost, cost-effectiveness, and cost-benefit, which was published in 1999 by the National

Institute on Drug Abuse and can be downloaded and read at the NIDA site: <http://165.112.78.61/IMPCOST/IMPCOSTIndex.html>. He also consults on a variety of projects, including a multi-site study of the marginal cost, cost-effectiveness, and cost-benefit of adding consumer-operated services to traditional mental health services.

Appendix D

Starting Early Starting Smart Grant Sites

This appendix provides additional detail about the *Starting Early Starting Smart* (SESS) grant sites and their programs. The SESS program is an initiative of the Office on Early Childhood, Substance Abuse, and Mental Health Services Administration (SAMHSA) and the Casey Family Programs, along with other federal sponsors. Patricia Salomon, Director of the Office of Early Childhood at SAMHSA, oversees the SESS program along with project officers Michele Basen, Velva Spriggs, and Jocelyn Whitfield, and staff Shakeh Kaftarian. At the Casey Family Programs, the partnership is overseen by Jean McIntosh and Barbara Kelly-Duncan, along with project officers Eileen O'Brien and Peter Pecora.

The SESS program currently operates in 12 sites across the United States Exhibit D.1 lists each of the study sites and the associated principal investigator, project director, and local researcher, first for the primary care (PC) sites and then for the early childhood (EC) sites.² Information about the Data Coordinating Center and subcontractor is also provided in Exhibit D.1. A brief description of the program at each site follows the exhibit. Further information about the SESS program is available from the Casey Family Programs (www.casey.org/projects.htm#sess) and SAMHSA (www.samhsa.gov).

Exhibit D.1

SESS Grantees Within Primary Care and Early Childhood Groups (in alphabetical order)

Study Site	Principal Investigator	Project Director	Local Researcher
Data Coordinating Center and Subcontractor			
EMT Associates, Inc., Folsom, Calif.	Joel Phillips	J. Fred Springer, Ph.D.	J. Fred Springer, Ph.D.
PRI, Bethesda, Md.		Irene Jilson, Ph.D.	

²One of the original SESS sites was unable to continue with the study but was an important contributor to the original design and implementation of the project.

Exhibit D.1—continued

Primary Care Sites			
Boston Medical Center, Boston, Mass.	Carol Seval, R.N., L.M.H.C.	Carol Seval, R.N., L.M.H.C.	Ruth Rose-Jacobs, Sc.D.
The Casey Family Partners, Spokane, Wash.	Christopher Blodgett, Ph.D.	Mary Ann Murphy, M.S.	Christopher Blodgett, Ph.D.
University of Miami, Miami, Fla.	Connie E. Morrow, Ph.D.	K. Lori Hanson, Ph.D.	Emmalee S. Bandstra, M.D. April L. Vogel, Ph.D.
University of Missouri-Columbia, Columbia, Mo.	Carol J. Evans, Ph.D.	Robyn S. Boustead, M.P.A.	Carol J. Evans, Ph.D.
University of New Mexico, Albuquerque, N.M.	Andy Hsi, M.D., M.P.H.	Bebeann Bourchard, M.Ed.	Richard Boyle, Ph.D.
Early Childhood Sites			
Asian-American Recovery Services, Inc., San Francisco, Calif.	Davis Y. Ja, Ph.D.	Anne Morris, Ph.D.	Anne Morris, Ph.D.
Child Development Inc., Russellville, Ark.	JoAnn Williams, M.Ed.	Carol Amundson Lee, M.A., L.P.C., M.C.C.	Mark C. Edwards, Ph.D., University of Arkansas at Little Rock
Children's National Medical Center, Washington, D.C.	Jill G. Joseph, M.D., Ph.D.	Amy Lewin, Ph.D.	Michelle J. C. New, Ph.D.
Johns Hopkins University, Baltimore, Md.	Philip J. Leaf, Ph.D.	Belinda E. Sims, Ph.D. Jocelyn Turner-Musa, Ph.D.	Philip J. Leaf, Ph.D.
State of Nevada, Division of Child and Family Services, Las Vegas, Nev.	Christa R. Peterson, Ph.D.	Laurel Swetnam, M.A.	Margaret P. Freese, Ph.D., M.P.H.
The Tulalip Tribes Beda?Chelh, Marysville, Wash.	Linda L. Jones, B.A.	Linda L. Jones, B.A.	Claudia Long, Ph.D., University of New Mexico
The Women's Treatment Center, Chicago, Ill.	Jewell Oates, Ph.D.	Dianne Stansberry, B.A., C.S.A.D.P.	Victor J. Bernstein, Ph.D., University of Chicago

Primary Care Grant Sites

Boston Medical Center, Department of Pediatrics

Participants: 200.

Population: African-American, Hispanic, and Haitian, ages birth to six months.

Boston Medical Center is a primary care site studying the integration of behavioral health services—Project RISE (Raising Infants in Secure Environments)—into its Pediatric Primary Care Clinic in Boston. Project RISE provides a range of integrated services from multiple internal service departments at the medical center and develops referrals to external collaborators. The service integration strategy also addresses barriers to access, and families receive transportation to some appointments as necessary. Collaborative agreements have been established with internal departments (e.g., Behavioral Health Services, Center for Excellence in Women's Health, Addiction Service of the Boston Public Health Commission, and River Street Detoxification Center).

The sample population for Project RISE includes inner-city, low-income caregivers who speak English, Spanish, and Haitian Creole and are experiencing a range of risks for mental health and/or substance abuse problems.

Participating parents and other caregivers (1) have a history of substance abuse/addiction and/or mental health problems or (2) have active substance abuse/addiction and/or mental health problems or (3) must be considered at-risk stemming from the presence of one or more other risk factors. Parents and other caregivers with major psychotic mental illness are excluded. The control group receives standard pediatric primary care at Boston Medical Center and transportation to regular well-child visits. The randomly assigned intervention and control groups include 100 families each, who are a diverse group of African-American, Haitian, Hispanic, and white non-Hispanic families newly immigrated from 30 different countries. Targeted children are newborn infants. Mother/infant dyads are screened to eliminate serious developmental and health risks (e.g., very low gestational age, HIV positive).

The core intervention team consists of family advocates and behavioral health specialists. Family advocates assigned to each intervention family are central to the Project RISE service strategy. Each family advocate handles case management activities and regularly visits each assigned family at home and in the primary care clinic. Family advocates see families beginning with the first well-child office visit (three to five days old), at age two weeks, and approximately every two months or as needed to age 24 months. They also home

visit as needed. They assist the primary care staff in the following up of referrals to specialty clinics within the medical center (e.g., clinics for exposure to lead, failure to thrive). Advocates also work closely with behavioral health specialists (substance abuse, mental health, and child development).

The behavioral health specialists serve as liaisons between pediatrics and internal and external agencies, such as psychiatric inpatient facilities, substance abuse treatment programs, and early intervention programs. They see families as needed, provide assessment and crisis intervention, and facilitate referrals to psychiatric services, substance abuse services, and early intervention by forging collaborative relationships with external agencies. To simplify the referral process for Project RISE parents and caregivers, two behavioral health specialists are assigned to treatment teams in Behavioral Health Services and a third is assigned to Addiction Services.

Casey Family Partners: Spokane

Participants: 170.

Population: 72% white non-Hispanic, 6% African-American, and 22% mixed heritage, ages birth to two and a half years.

Casey Family Partners: Spokane (CFPS) is a primary care site providing assessment and treatment to children and families who have been referred to Child Protective Services (CPS) for child abuse or neglect. Although CFPS serves families affected by both abuse and neglect, only neglect cases are eligible to participate in the SESS study. The target population is 72 percent white non-Hispanic, 6 percent African-American, and 22 percent mixed heritage. The total sample size will be 70 treatment and 100 control children.

The goal of CFPS is to restore children and their families to a healthy, productive life and to expedite permanency planning. A strength-based, intensive case management model is coupled with co-located mental health counseling and substance abuse treatment services, as well as screening and referral for pediatric health, developmental, and parenting skills services.

CFPS case managers ("Family Team Coordinators") work in tandem with CPS social workers assigned to each intervention family to support the family in achieving service goals, while ensuring that the services required for resolving dependency issues are obtained. Family service plans are developed in conjunction with a family team, composed of the client's family, extended family, friends, and collaborators working with the family. The CFPS SESS program focuses on the service needs of both the child and the parent, whereas child

welfare decisionmaking typically focuses on the parent's problems that led to the abuse and neglect. Addressing the child's service needs, co-locating critical services in one convenient location, and empowering clients to develop and involve natural support groups of families and friends in their treatment are hallmarks of the CFPS program.

University of Miami School of Medicine's Perinatal CARE Program

Participants: 242.

Population: 52% African-American, 29% Hispanic, 12% Caribbean, and 7% white non-Hispanic, ages birth to three years; 53% of caregivers are known substance users at enrollment.

Miami's Families SESS is administered by the University of Miami (UM) School of Medicine's Perinatal Chemical Addiction Research and Education (CARE) Program. This site is based at the Juanita Mann Health Center (JMHC), a UM/Public Health Trust Community Health Center, which provides a full array of primary health care services in high-risk neighborhoods. The total sample size is 121 intervention children and their families and 121 comparison children and their families.

The Perinatal CARE Program collaborates with various community organizations that provide direct health care, substance abuse treatment/prevention, adult and child mental health, and basic needs services. The JMHC medical staff and Healthy Start High-Risk Children's Program community health nurses are fully integrated into the multidisciplinary team. Collaboration with substance abuse treatment providers has consisted of prioritized referral processes and ongoing consultation with treatment center staff to monitor and support client progress. Simplified referral and co-staffing procedures have been established with several mental health providers. Streamlined referral and service access with early intervention providers has ensured that children identified as developmentally delayed receive immediate evaluation and placement.

Program services include the following:

- *Care Coordination.* Care coordinators, supported by a multidisciplinary team, provide intensive services in a flexible, family-centered format to maintain rapport and facilitate family participation in interventions. Activities include regular face-to-face contact at home visits and on site at JMHC; appointment scheduling, reminders, and follow-up; ongoing needs assessment and participatory family service planning; facilitation of needed service referrals

(including basic needs) through cross-agency contacts; and ongoing referral follow-up to assess and address barriers to service utilization.

- *Mental Health and Substance Abuse Treatment and Prevention.* Training for all levels of SESS and collaborating agency staff in the areas of substance abuse and mental health is essential to properly serving families affected by these issues. Ongoing clinical evaluation and informal observation of caregivers' substance use and mental health status is equally important, because these factors are dynamic. SESS staff utilize a flexible approach, addressing these issues with caregivers at their current level of readiness for change. Crisis intervention and stabilization services are often needed, and treatment engagement efforts are intensive when a need for formal treatment is identified. These engagement activities attempt to overcome treatment barriers through ongoing discussion and supportive encouragement by all SESS staff, solicitation of the support of family members and significant others, and a focus on the impact of parental functioning on children and families. When formal referrals are unwanted or not necessary, short-term individual and family counseling sessions are provided by licensed SESS staff. Preventive educational topic groups related to mental health and substance abuse prevention have been offered monthly on various requested topics.
- *Parenting Interventions.* Several group and individual services are designed to support successful parenting of infants and young children, and efforts are made to include all significant caregivers—mothers, fathers, extended family, and alternative caregivers. Interventions encourage the development and maintenance of appropriate family and peer support systems. Families find it helpful that individual and home-based parenting sessions are available when issues cannot be appropriately addressed in a group setting or they are unable to attend. Two formal group curriculums are described below, and families participate in a formal graduation ceremony following completion of each group. An ongoing grandparents' support group and parent advocacy group meet regularly.

The "Baby & Me" Group is a 14-week parent-infant therapy program that promotes attachment, caregiver knowledge and understanding of infant development and behavior, and empowerment/insight into the impact of the caregiving environment. Each session with three to five parent-infant dyads is two hours and includes group process activities, structured parent-child interaction, practical didactic discussions, and work on a baby book. Didactic topics include attachment, infant communication cues, crying/soothing, sleep/wake patterns, infant medical care, feeding, safety, child abuse prevention, stress management, and anticipatory developmental guidance.

Sessions are designed to facilitate discussion in a manner that is fun and engaging, as well as educational.

The 14-week "Strengthening Multiethnic Families and Communities Program" meets for three hours weekly with 10 to 12 parents. It emphasizes raising children in violence-free environments. Violence prevention is addressed through ethnic/cultural roots, parent-child relationships, parent modeling in the family and community, and parent teaching and discipline. The curriculum helps parents teach children to express emotions, develop empathy, manage anger, and enhance life skills needed to function in society. The program also integrates positive discipline approaches aimed at fostering self-esteem, self-discipline, and social competence. Developing cultural awareness through family rituals/traditions and the importance of community involvement by parents are emphasized.

Curators of the University of Missouri

Participants: 150.

Population: Predominately white non-Hispanic, ages birth to five years.

The University of Missouri is a primary care site studying the integration of behavioral health services into a university pediatric primary care clinic located in Boone County, Missouri. The Healthy Foundations for Families Program serves children between birth and five years of age who live within Boone County. The population served in the pediatric primary care clinic is predominately white non-Hispanic, with a small minority and international population. Referrals are from physicians or self, and selection within the population is based on the caregiver needs with respect to parenting stress. After screening, participants are randomly assigned to the intervention ($n = 75$) or comparison ($n = 75$) groups. Those who are not assigned to the intervention receive the usual standard of care, which typically involves referral to other community or hospital-based services from the primary care clinic.

The intervention integrates health and human service professionals working with very young children and families. The professional team includes an on-site recruiter and the child's pediatrician. Family associates are housed in the community. Mutually agreed-on referral forms and release of information forms have been developed to allow for a more expedient and efficient way to initiate the referral/intake process for families. Contracted agencies include those who provide the following:

- Substance abuse counseling.

- Early childhood education.
- Parent education.
- Therapeutic interventions for emotional and behaviorally challenged children and their families.
- Intervention to families with histories of child abuse and neglect.

The family associate is responsible for working with families to identify and coordinate services for the child and family and provide age-appropriate anticipatory guidance from parents in the areas of child health, development, and parent-child interaction. For services beyond those provided at the clinic, families are referred to contracted agencies and other services within the community. To facilitate access to these services, wraparound funds have been established to support program families who experience transportation and child care difficulties. Flexible funds are also available to pay for therapeutic intervention, as well as support services like child safety items, utility bills, or a parenting class.

The community and clinic-based professionals involved receive training on cross-professional issues, culturally competent care, family-centered care of families with young children, anticipatory guidance, and emotional/behavioral problems in young children. In addition, community agencies have been contracted to serve as consultants with regard to barriers that prevent participants from keeping appointments and following through with services.

University of New Mexico

Participants: 200.

Population: Reflects the major ethnic groups in Albuquerque: Hispanic, white non-Hispanic, African-American, Native American, and multiracial, ages birth to three years.

The University of New Mexico Health Sciences Center (HSC) in Albuquerque is the site for the Starting Early to Link Enhanced Comprehensive Treatment Teams (SELECTT) program for families and their children. For the purposes of this study, only families residing in the greater metropolitan area of Albuquerque, within a 40-mile radius, participate in SELECTT.

Families are recruited through referrals from HSC staff, including its specialty clinics and collaborating programs, partner agencies that include private hospitals, Head Start and Early Head Start, and through recruitment presentations made at Career Works/Welfare to Work orientation classes. The

program enrolls children under three, with continuing service to age seven, when there is identified family substance use, mental health, domestic violence, and/or unsupported teen issues.

Once a family has been identified as meeting the SELECTT criteria, they are assigned randomly to a treatment group or a control group. Both receive case management services, although those in the control group receive a minimum of four hours of case management per year. Those in the intervention group receive intensive case management, according to a strengths-based, solution-focused approach to engaging and working with families. All service assessment and provision is predicated on the belief that families will become more productive if they focus on healthy behaviors that produce positive change. Families benefit from an interdisciplinary team and case review (i.e., a family service delivery plan), during which service providers discuss goals, identify specific program outcomes, and review family progress in attaining these goals and outcomes.

SELECTT offers child-centered, family-focused services in three locations: at home, in an integrated HSC clinic held one day per week at the Family Practice Clinic of the HSC, or in the SELECTT offices. The unique feature of the program is its capacity to address the needs of the entire family, focusing on healthy behaviors that produce positive change. Program services include the following:

- Primary, Coordinated Medical Care.
- Case Management Services.
- Child Developmental Assessment and Intervention.
- Legal Services.
- Solution Focused Clinical Approaches.
- Substance Use Counseling.
- Mental Health Counseling for Children and Adults.
- Parenting Support Groups.
- Interdisciplinary Team Services.
- Parent Advisory and Community Steering Advisory Committees.
- Extensive Community Referral Base to Early Intervention, Behavioral Health Services.

As a result of its programmatic efforts toward service integration, SELECTT merged with three other programs at the HSC to provide a continuum of services for high-risk children and their families. This collaboration will enhance services across the four programs by offering a wider spectrum of services, cross-training, streamlined documentation, and eventually, a pooling of financial resources.

SELECTT's Steering Committee meets monthly with its HSC and community collaborators to discuss program policy, service issues, and other issues to ensure that services are provided to the families. The principal investigator and program manager are heavily involved in a variety of local and state ad hoc and formal groups, whose goals are to further systems and services integration in specific service areas, such as domestic violence, child witness to violence, early intervention, health care/Medicaid issues, home visiting, and mental health/substance abuse. Among its successes, SELECTT counts its mobilization of the Albuquerque and New Mexico community at its "Community Forum," held in Albuquerque in October 2000, which focused on "Making New Mexico a Child-Friendly State."

Early Childhood Grant Sites

Asian-American Recovery Services, Inc.

Participants: 291.

Population: Predominately Chinese with a minority of Hispanic and African-American, ages three to five years.

Asian-American Recovery Services, Inc., is an early childhood grantee assessing the integration of services for an at-risk population composed largely of recently immigrated families. The target population consists of children and their family members at four preschools operated by Wu Yee Children's Services in two inner-city San Francisco neighborhoods. The total sample is 191 intervention children and 100 comparison children. The comparison schools were selected based on their proximity to these neighborhoods, ethnic background, and school size.

Through SESS, the intervention children and their families participate in "CAPS": Comprehensive Asian Preschool Services. The CAPS program is supported by multidisciplinary community partnerships, which include AARS, Inc.; Wu Yee Children's Services; Chinatown Child Development Center (CCDC); and Chinatown Public Health Center. To facilitate organizational collaboration, community partners meet monthly to review policy issues and make progress toward reducing barriers to accessing services.

The CAPS intervention involves both a family advocate and a multidisciplinary case management team. Family advocates provide flexible, responsive, personal contact and support for families. The multidisciplinary family service team, which includes the family advocate, early childhood teaching staff, and a mental health consultant, assesses and plans for service integration for each family. The

intervention combines intensive services designed to strengthen family capacity, child development, and access to behavioral health services for assessed families. Children receive enhanced child development services as part of their preschool classes. SESS provides for a partnership with CCDC, a community mental health agency specializing in working with immigrant families. The CCDC mental health consultant provides observation, assessment, and guidance to staff. Children and families in need of additional behavioral health services are referred to community partners off site. Additional intervention strategies include the following:

- Socialization groups for identified children.
- Information and referral for families.
- Parent training and empowerment groups.
- Family relationship enhancement activities.
- Home visiting.

Each year the program operates parent empowerment groups. The program also offers an eight-week, culturally appropriate parent education series at the intervention sites. Parents unable to attend the series receive this information through the family advocates during home visits. The program interventions will continue, according to family need, for up to three years. SESS services are provided at both the early childhood centers and in the home, striving to meet the unique needs of each family.

Child Development, Inc.

Participants: 240.

Population: Primarily white non-Hispanic and African-American, ages three to five years.

Child Development, Inc., is an early childhood site assessing the integration of behavioral health services into Head Start sites serving nine rural Arkansas counties. The intervention and comparison groups consist of children who entered Head Start at age three during the 1998–1999 school year. The sample size is 240—120 intervention children and 120 comparison children. Treatment sites in the target communities were randomly selected, then matched with comparison sites according to center size and type, community income level, number of classrooms, ethnic background of the student body, and age of the Head Start facility. Children at both sites are primarily white non-Hispanic or

African-American. Any children who receive parental consent in the intervention and comparison centers are study participants.

The intervention is organized at several levels: community, classroom, and individual family. At the community level, each intervention center has a regional steering committee. The steering committee operates separately from the interdisciplinary team, functioning as a policy organization designed to decrease inter organizational barriers and enhance collaborative capacity. Steering committee members include collaborating agencies, such as the local mental health agency and community mental health providers, the local substance abuse treatment agency, criminal justice, the public school system, county child protective services, victim's assistance, parents, and the Head Start centers. Staff in community organizations receive SESS-sponsored cross-training in such issues as cultural sensitivity in service provision and multiple service coordination. The project conducts extensive training on issues related to resiliency, substance abuse, and child and family issues, focusing on the development of on-site dialogue teams, increased on-site training, and resource enhancement.

At the classroom level, classrooms receive support through training of teachers and staff, and through the provision of behavior management specialists and case managers who assist and advise teachers in addressing behavioral problems in SESS classrooms. They also work closely with mental health practitioners in the development of activities for children.

Families and index children receive an intensive array of services and support during their two years of Head Start and seven months of kindergarten. Case management focuses on developing individualized interventions based on family members needs that have been expressed in the family partnership agreements. Caregivers in the intervention group receive extensive training in parenting through education and support groups, parent-child bonding activities, and the incorporation of prevention activities into parent meetings. Intervention children and families receive most services on site at the Head Start Centers, and home visits provide additional service delivery. Mental health and substance abuse services not co-located on site are made available at collaborating agencies or other referral facilities.

The lead agency provides behavioral health services to intervention children and parent education and training to caregivers. Collaborating agencies provide support groups, mental health services, and outpatient and residential substance abuse services. Collaborating agencies have increased accessibility by extending service hours and simplifying administrative requirements. For families who

have difficulty paying for mental health or substance abuse services, the intervention provides a flexible funding source to pay for services, copayments, and deductibles when no other payment sources exist.

Children's National Medical Center

Participants: 280.

Population: 60% Latino, 25% other immigrant, 15% African-American, age four years at recruitment.

The Children's National Medical Center is an early childhood grantee testing the effectiveness of service integration in a Head Start setting in the suburban environment of Montgomery County, Maryland. The sample size is approximately 280—140 intervention and 140 comparison children. Both groups include families and their four-year-old children who attend Head Start. All families whose children attend one of four Head Start schools may participate in the study. Participants are assigned to intervention or comparison groups based on the school attended. Two of the four schools were randomly designated as intervention sites and two as comparison sites. The sample is estimated to be 60 percent Latino, 25 percent other immigrant, and 15 percent African-American.

Intervention provided by SESS staff takes place in the Head Start classrooms and participants' homes. Additional services are delivered in various public and private community agencies. The planned intervention integrates and facilitates access to mental health, substance abuse, educational, physical health, and social services (including housing, financial assistance, vocational training, adult education, and other social service programs).

The collaboration is designed to reduce unmet needs for a variety of mental health, behavioral, and social services through effective service integration of existing community services supplemented by specific home and school-based interventions. Both types of services are provided through linkages to community organizations. The Family Services Agency, Inc. (FSAI), provides regular home visitations by Peer Family Support Workers (FSW) to intervention families to support normative development and effective parenting. FSWs also develop relationships with the family, provide assessments, support family functioning, make recommendations and referrals, assist in follow-through on referrals, and coordinate services. Through Connect for Success (CFS), early childhood mental health specialists provide weekly consultation to Head Start staff in the intervention classrooms. Under the supervision of a clinical psychologist and bilingual MSW, the FSAI and CFS staffs have regular case

conference meetings to discuss the needs of specific families, develop intervention plans, and ensure the integration and coordination of home and school interventions.

Service integration and facilitation occurs at multiple project levels. First, representatives from public and private service providers participate in the Montgomery County SESS Community Consortium, which meets regularly to better understand and accomplish service integration. Second, FSWs serve as case managers with intervention families to facilitate access to services and coordinate services used by families with multiple-sector needs. Third, cross-training, particularly in substance abuse and child development, is conducted for SESS, Head Start, and community provider staff. Finally, regular case conferences facilitate multisector integration by addressing the needs of families requiring services from multiple agencies.

The intervention changes significantly in the second year, when the intensity of the home visitation component is reduced and classroom consultation is no longer available. During the second year, the children make the transition into public school kindergarten—a transition that is often a source of stress. The second-year intervention is intended to provide a bridge to independence.

Johns Hopkins University

Participants: 540.

Population: African-American, ages three to five years.

Johns Hopkins University School of Hygiene and Public Health is an early childhood site studying the integration of behavioral health services into two Head Start Centers in Baltimore. The intervention group includes African American children ages three to five and their families, compared with children attending two similar Head Start programs without SESS services. The total sample size is 320 intervention and 220 comparison children. The program is offered to all children and their families at the intervention centers.

The intervention strategy blends preventive services to families with assessment and case management for effectively addressing behavioral health problems potentially impacting the development of index children. All Head Start programs screen children to identify their specific needs and refer them to the appropriate services. However, the intervention group benefits from additional on-site services, including a mental health clinician and resource coordinator who work collaboratively with Head Start staff and community providers to expand and coordinate available services to Head Start children and their families.

Programmatic efforts focus on the following:

- Providing families with services are coordinated on-site and in the community.
- Staff development.
- Parent training.
- Family support groups.

Specifically, an on-site clinician is available to provide direct services to families and staff (staff consultations) and to facilitate family group services.

Community-based services are coordinated and integrated through developing a network of services within the community (e.g., substance abuse). At each site, a family community resource coordinator has been added to augment Head Start staff and to work with families and staff to help families access the coordinated services as well as other services they need.

Families have the opportunity to participate in the Pyramid to Success program. This curriculum is designed to help parents develop effective discipline strategies for their children, with a focus on heritage-based and strength-based ways to promote the development of African-American children. In addition, parents have the opportunity to participate in the Families and Schools Together program, a whole-family support group model with an emphasis on substance abuse prevention.

Head Start staff at the two intervention sites participate in joint staff development trainings several times during the school year, as well as site-specific trainings. An advisory group of Head Start parents as well as input from advisory groups from citywide services systems (e.g., Baltimore Substance Abuse Systems) help facilitate the progress of the program.

The on-site clinical services, family parenting/support groups, and staff development activities are delivered in the Head Start Centers. Service integration and coordination activities are coordinated through the Head Start Centers with services received at community-based program sites.

The State of Nevada Division of Child and Family Services

Participants: 192.

Population: Approximately 55% African-American, 35% Hispanic, 10% white non-Hispanic, and a small number of Native American and Asian, ages three to four and a half years.

The state of Nevada is evaluating the impact of New Wish, a project that provides the integration of behavioral health, developmental, substance abuse treatment, and family advocacy services into Head Start sites in Clark County. Targeted children range in age from three to about five years and must be enrolled in Head Start. In Las Vegas, the major city in Clark County, roughly 55 percent of its Head Start preschoolers are African-American, 35 percent are Hispanic, and 10 percent are primarily white non-Hispanic, with a small number of Native Americans and Asians. The study sample size is 192—80 intervention and 112 comparison children. Once families are enrolled in the intervention, services are provided whether or not the child remains in Head Start. The comparison group, which receives traditional Head Start services, is selected from demographically similar Head Start centers. Teachers refer children in need of behavioral health services to the study at both the intervention and comparison centers.

Within the community two powerful barriers to behavioral health and substance abuse treatment programs have been observed: (1) mistrust of formal systems and of individuals who work for them by families who need the programs and (2) fees, transportation, and child care are major issues among the targeted population. New Wish addresses these barriers in the following ways:

- Case managers and family specialists (parent advocates) teach parents to be more effective as advocates and service coordinators.
- Many services are co-located at Head Start centers or provided in families' homes.
- Special arrangements are made to access and support chemical dependency treatment.
- Linkages with collaborators provide access to county mental health services.
- Transportation and childcare are provided as necessary.

The intervention involves the integration of behavioral health services for Head Start children, parents, and families. This includes family and adult mental health (Early Childhood Services, Southern Nevada Adult Mental Health), substance abuse treatment (Bureau of Alcohol and Drug Abuse funded programs in Southern Nevada), developmental services for children (Clark County School District), and family advocacy (Parents Encouraging Parents). Each family chooses a team of representatives from programs providing services to that family. This team meets at least quarterly with parents to formulate a broad-based family intervention plan and to coordinate services. Each family chooses a case manager for the team, who helps parents learn how to achieve follow-through, establish collaboration with service providers, set treatment goals, and

achieve them. All service providers communicate changes of plans or difficulties in implementation of service plans with the case manager.

Behavioral health services are offered in the home or at the child's Head Start site by New Wish counselors. More intensive child behavioral health services, such as psychiatric evaluation, medication monitoring, and day treatment, are provided at the most convenient Early Childhood Services site. Developmental services, adult mental health programs, and substance abuse treatment programs are provided by collaborators at the nearest appropriate site. Referrals are expedited for New Wish families.

New Wish counselors are based at New Wish Head Start sites where they are generally available for informal conversation and consultation with parents and teachers. They perform a range of prevention programming for children, adults, and families. Their involvement and usefulness to families results in more openness about families' problem areas.

The Tulalip Tribes

Participants: 201.

Population: Native American, ages three to five years.

The Tulalip Tribes' beda?chelh ("our children") is an early childhood grantee assessing integrated services for "at risk" three- to five-year-old tribal and mainstream children and their families. The Tulalip tribal children and families are accessed through Catholic Community Services' Childspace in Everett and St. Mike's Tikes preschool in Olympia, both of which serve smaller, intact communities within a larger suburban setting. Lummi Head Start provides the comparison for the Tulalip preschools, because Lummi is a Northwest tribal community similar to the Tulalip Tribes. The South Everett Montessori and the South Sound YMCA preschools are comparison sites for the mainstream groups because they serve families socioeconomically similar to those served at ChildSpace and St. Mikes' Tikes. In both tribal and mainstream intervention sites, beda?chelh believes in a mind, body, and spirit approach to reducing risks and enhancing protective factors in children and their parents, and interventions are designed to strengthen individual skills by strengthening the bonds between children and their families and communities. The total sample size is 113 intervention and 88 comparison children.

The intervention involves service integration strategies at the individual, classroom, and community levels. Multidisciplinary teams composed of family members, case managers, child therapists, clinical and legal consultants, child

welfare workers, and treatment providers from substance abuse, mental health, and domestic violence fields assess and develop service plans for index children and their families. Interagency collaboration occurs through participation on the multidisciplinary team and on professional advisory boards, which guide the project. Several intercommunity collaborative ties and partnerships extend service provision to the larger communities in which index children reside. All of the above integration strategies are unique to the SESS project, with the exception of the multidisciplinary team. Even this team, however, has been significantly expanded and strengthened under the SESS project.

The integrative mechanisms will guide delivery of and enhance access to services. All index children will receive the following:

- Enhanced preschool curriculums (violence and alcohol, tobacco, and other drug-prevention curriculum through use of the Nee-Kon-Nah Time curriculum).
- Reading readiness and connectedness/bonding through traditional storytelling.
- Milieu therapy in the preschools.
- Gymnastics lessons.

Case management provides access and follow-through for child therapy, mental health services, chemical dependency treatment, family preservation services, domestic violence treatment (for perpetrators and victims), housing assistance, and parenting education and support. These services are provided by the grantee, its partnering agency, and collaborative agencies and organizations.

The curriculum and child-centered services are provided at the early childhood centers and other services are provided at nearby and convenient locations. Family preservation services are provided in the home, as are other services if caregivers are unable to gain access to center-based services. The children and families will receive the majority of their services in the child care/preschool setting. All of the children's enrichment services and the majority of the child therapy are provided in the child care/preschool settings. The family services of substance abuse, mental health, and domestic violence treatment and parenting education occur, for the most part, in the family's small and intact community. Through the project's interagency collaborations, services in the greater community (e.g., inpatient chemical dependency or mental health treatment) are accessed as needed.

The Women's Treatment Center

Participants: 185.

Population: Primarily African-American, ages three to four years.

The Women's Treatment Center is an early childhood grantee collaborating with the Ounce of Prevention Fund and the University of Chicago to study the integration of behavioral health services into a Head Start site located on Chicago's South Side. The intervention group is recruited from two classes and includes African-American children, ages three to four. These children are compared with African-American children receiving traditional Head Start services at a comparison site.

The comparison group is in Head Start, but there are differences in case management procedures. Only the intervention sites receive substance abuse prevention and treatment and mental health services. Both sites have Head Start family support worker services available to them. More intensive family counseling is available at the intervention sites.

The services integration strategy involves the addition of two substance abuse/family support counselors to work directly with all families in the intervention program and additional behavioral health specialists to meet identified needs and make appropriate referrals.

The intervention site receives the following:

- Group parent education.
- Group substance abuse education, screening and referral for treatment and aftercare.
- Mental health screening and referral for treatment.
- On-site family counseling.

A psychologist and a parent-child specialist are available to work with the Head Start staff and family support counselors to develop individual family service plans. These behavioral health specialists are a resource for the integrated staff. On-site substance abuse services for intervention group families are immediately available and free of charge, funded through the SESS grant. Additional service needs are more readily available through the intervention site. Intensive outpatient or residential substance abuse treatment available through the Women's Treatment Center and an outside collaborator provides services for males. Intensive mental health services are provided through an external collaborator. SESS provides for extensive cross-training of professionals from

other disciplines regarding the identification, signs, and symptoms of substance abuse.

The bulk of services takes place at the Head Start centers, while such specialized needs as substance abuse treatment take place at the Women's Treatment Center and other collaborating agencies. Each intervention and comparison center has the benefit of a Head Start Parent Advisory Council.

Appendix E

Background Reading Materials

Foster, E. Michael and Leonard Bickman (2000). "Refining the Costs Analyses of the Fort Bragg Evaluation: The Impact of Cost Offset and Cost Shifting." *Mental Health Services Research*, 2(1), 13-25.

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Yates, Brian T. (1998). "Formative Evaluation of Costs, Cost-Effectiveness, and Cost-Benefit: Toward Cost→Procedure→Process→Outcome Analysis." In L. Bickman and D. J. Rog (Eds.), *Handbook of Applied Social Research Methods* (pp. 285-314). Thousand Oaks, CA: SAGE Publications.